

In the Claims

1.-2. (Cancelled)

3. (Original) A therapeutic composition comprising at least one peptide having an amino acid sequence consisting of an amino acid sequence selected from sequences set forth in SEQ ID NO:1, SEQ ID NO:2, SEQ ID NO: 3, SEQ ID NO: 4, SEQ ID NO: 5 or SEQ ID NO: 6.

4. (Original) The therapeutic composition according to claim 3, wherein the amino acid sequence is conjugated to a carrier protein.

5. (Original) The therapeutic composition according to claim 4, wherein the carrier protein is a viral carrier protein.

6. (Original) The therapeutic composition according to claim 5, wherein the viral carrier protein is selected from the group consisting of gag, env, nef and fragments thereof.

7. (Currently amended) The therapeutic composition according to claim 3 +, further comprising a pharmaceutically acceptable carrier.

8. (Original) A therapeutic vaccine comprising at least one Tat linear epitope peptide comprising from about 15 to about 21 amino acid residues from the amino terminus region of HIV Tat, wherein the amino acid sequence comprises at least amino acid residue 1, 7 and 12.

9. (Original) The therapeutic vaccine according to claim 8, wherein the Tat linear epitope peptide is conjugated to a carrier protein.

10. (Original) The therapeutic vaccine according to claim 9, wherein the carrier protein is ovalbumin or a viral carrier protein.

11. (Original) The therapeutic vaccine according to claim 10, wherein the viral carrier protein is gag, env, nef or fragments thereof.

12. (Original) A method to induce production of neutralizing Tat antibodies that inhibit internalization of Tat into T-cells, the method comprising:

administering to a subject an effective amount of a vaccine to induce production of neutralizing Tat antibodies, the vaccine comprising at least one peptide having at least 15 amino acid residues from the amino terminus region of Tat conjugated to a viral carrier protein, wherein the amino acid sequence comprises at least amino acid residue 1, 7 and 12.

13. (Original) The method according to claim 12, wherein the peptide is selected from sequences set forth in SEQ ID NO:1, SEQ ID NO:2, SEQ ID NO: 3, SEQ ID NO: 4, SEQ ID NO: 5 or SEQ ID NO: 6.

14. (Original) The method according to claim 13, wherein the viral carrier protein is env, gag, nef or fragments thereof.

15. (Original) The method according to claim 14, wherein the vaccine is administered contemporaneously with an antiviral agent.

16. (Original) The method according to claim 15, wherein the antiviral agent is selected from nucleoside RT inhibitors, CCR5 inhibitors/antagonists, viral entry inhibitors or their functional analogs.

17. - 21. (Cancelled)

22. (Original) A polynucleotide sequence comprising a nucleotide sequence encoding a peptide having at least about 15 to about 21 amino acid residues from the amino terminus region of HIV Tat, wherein the peptide comprises at least amino acid residue 1, 7 and 12.

23. (Original) The polynucleotide sequence according to claim 22, wherein the nucleotide sequence is selected from sequences set forth in SEQ ID NO: 7, SEQ ID NO: 8, SEQ ID NO: 9, SEQ ID NO: 10, SEQ ID NO: 11 or SEQ ID NO: 12.

24. (Original) The polynucleotide sequence according to claim 23, wherein the nucleotide sequence encoding the peptide is linked to a nucleotide sequence encoding a viral carrier protein.

25. (Original) The polynucleotide sequence according to claim 24, wherein the viral carrier protein is gag.

26. (Original) An expression vector comprising the polynucleotide sequence according to claim 22.

27. (Original) An expression vector comprising the polynucleotide sequence according to claim 23.

28. (Original) An expression vector comprising the polynucleotide sequence according to claim 25.

29.-31. (Cancelled)

32. (Original) A method of expressing a Tat amino terminus linear epitope peptide comprising the steps of:

(a) transfecting a recombinant host cell with a polynucleotide according to claim 22; (b) culturing the host cell under conditions sufficient for expression of the Tat amino terminus linear epitope peptide; (c) recovering the Tat amino terminus linear epitope peptide.

33.-36. (Cancelled)

37. (Currently amended) An antibody immunoreactive with a Tat amino terminus linear epitope peptide according to claim 34.

38.-39. (Cancelled)

40. (Currently amended) A method of producing an antibody that is immunoreactive with a Tat amino terminus linear epitope peptide according to claim 8 comprising the steps of:

(a) introducing a Tat amino terminus linear epitope peptide according to claim 1 into a live animal subject; and
(b) recovering the antibody

41. - 45 (Cancelled)